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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,445	01/18/2002	Brian Merrigan	01-580	1922

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LSI LOGIC CORPORATION
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EXAMINER

NGUYEN, THUAN T

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/051,445	Applicant(s) MERRIGAN, BRIAN	
	Examiner THUAN T. NGUYEN	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-22 is/are allowed.
- 6) ☒ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 2,4,7 and 8 is/are objected to.
- 8) ☒ Claim(s) 13-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Remark

1. Applicants elects claims 1-11 and 18-23 (refer to new renumbered claims) since claim 5 was previously not existed, and claims are originally from 1-4, and 6-24, which the examiner considers now as claims 1-4, 6-12 and 19-24 based on the originally numbered claims filed (because of the issue of claim dependency; and the applicant needs to correct all of these errors for all claims to make claims in proper numbers and valid dependency).

Information Disclosure Statement

2. Please note that the IDS in PAIR as shown (07/28/04) within this application was actually an error from the Patent office, that IDS was for another application 09/646,776 and also for a different examiner instead. Therefore, there is no need for the examiner to consider this incorrect IDS statement.

Claim Rejections - 35 USC 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

4. Claims 1, 3, 6, 9-12 and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sandusky et al. (U.S. Patent No. 6,112,125).

Regarding claim 1 and 23-24, Sandusky discloses a filter comprising biquadratic low pass filters connected in series as called for in claims for a first pole, a second pole, a third pole for providing low pass signal and a high pass signal at the second pole, then a combiner or a sum

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for combining the third low pass signal and the high pass signal to provide a combined signal (Sandusky, Fig. 4, section 100 for filter section, with biquad 1, biquad 2 and biquad 3 for three poles, with signal at 131 to biquad 2 regarding as high pass signal under the Bias generator 113, and the combination signals of that signal and the third pole or biquad 3 is summed at node 109, and col. 7/lines 30 to col. 8/line 7 for the details of the tuning filter).

As for claims 3 and 6, Sandusky suggests the third bandpass frequency is higher than the first bandpass frequency, and the high pass signal corresponds to a portion of the first low pass signal rejected by the second pole (Fig. 4 for the illustration with signal 131 from biquad 2 which gets the first low pass signal from biquad 1; and col. 7/lines 49-62 as the control circuit can be incremented the value for getting higher bandpass frequency).

As for claims 9-12, Sandusky suggests the filter is a tuner filter, the filter is implemented in an integrated circuit, an Gaussian family filter, and an equiripple filter (col. 5/lines 23-67 for tuning filter and IC circuit and also equiripple implementation of the 7th order CT filter is part of the Gaussian family filter).

Allowable Subject Matter

5. Claims 2, 4, and 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not further teach these features of claims 2, 4, and claims 7-8.

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6. Claims 19-22 has been allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach a filter comprising a plurality of filter poles coupled in series; a bypass pass AND the claiming steps therein similar to claims 7 and 8.

Conclusion

7. The prior art made of record and no relied upon is considered pertinent to applicant's disclosure:

Hasegawa, Rezzi et al., Tomasz, and Waggener (in PTO 892 attached) disclose systems related to filters with biquadratic low pass characteristics.

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to the New Central Fax number:

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,

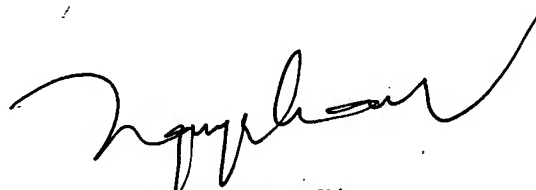
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

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The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Division or Art Unit 2618.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TONY T. NGUYEN
PATENT EXAMINER

Tony T. Nguyen
Art Unit 2618
May 08, 2006